

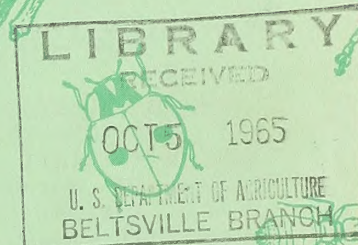
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Cooperative
**ECONOMIC INSECT
REPORT**



Issued by

**PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE**

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

CORN EARWORM damaging sweet corn in several areas; infestations moderate to heavy. Also of some concern on soybeans and peanuts. FALL ARMYWORM damaging corn in several States. EUROPEAN CORN BORER appears heavier in southeastern Nebraska than in 1964. (p. 1135). SOUTHERN CORN ROOTWORM populations in Nebraska increased over those present in 1964. (pp. 1135, 1136). GRASSHOPPERS economic on several hundred thousand acres in Santa Cruz and Pima Counties, Arizona. CHINCH BUGS (*Blissus* spp.) damaging Bermuda grass in Florida and Texas. (p. 1136). ALFALFA CATERPILLAR causing moderate damage to alfalfa in Arizona, and adults reported heavy in New Mexico. (p. 1138).

CITRUS RED MITE infestations on Florida citrus lowest on record for September and near lowest recorded in 15 years of observation; and PURPLE SCALE at lowest level in 15 years of record. (pp. 1139, 1140). RED DATE SCALE heavy and causing severe yield reduction of dates in Arizona. EUROPEAN RED MITE bronzing grape foliage in Ohio. (p. 1140).

BOLLWORM continues of concern in some cotton areas. (pp. 1141, 1142).

HOUSE FLY moderate to heavy in areas of Oklahoma and more abundant in Moscow area of Idaho than observed in past 20 years. (p. 1145).

DETECTION

New State record reported was SPOTTED ALFALFA APHID (*Therioaphis maculata*) in Michigan. (p. 1137).

New county and parish records included: SPOTTED ALFALFA APHID in Calhoun, Branch, St. Joseph, Cass and Van Buren Counties, Michigan, (p. 1137); WALNUT HUSK FLY (*Rhagoletis completa*) in Yolo and Placer Counties, California, (p. 1139); ELM LEAF BEETLE (*Galerucella xanthomelaena*) in El Paso, Pecos and Bowie Counties, Texas, (p. 1144); JAPANESE BEETLE (*Popillia japonica*) in Jefferson County, Indiana, (p. 1147); and WHITE-FRINGED BEETLES (*Graphognathus* spp.) in Clay County, Alabama; St. Landry and Ouachita Parishes, Louisiana; and Marshall County, Mississippi, (p. 1147).

Corrected DETECTION for Volume 15, Number 39, page 1113.

New State records included: An ENCARTID WASP (*Trechmites insidiosus*) in Oregon (p. 1127) and GIANT HORNET (*Vespa crabro germana*) in Indiana (p. 1128).

New county or parish records included: WESTERN CORN ROOTWORM (*Diabrotica virgifera*) in Hancock County, Illinois, (p. 1116), and in Meade County, South Dakota, (p. 1129); NORTHERN CORN ROOTWORM (*Diabrotica longicornis*) in Bennett, Jackson, Shannon, Fall River, Custer, Pennington and Lawrence Counties, South Dakota, (p. 1129); SPOTTED ALFALFA APHID (*Therioaphis maculata*) in Custer, Jackson, Lawrence, Meade, Pennington and Shannon Counties, South Dakota, (p. 1129); WALNUT HUSK FLY (*Rhagoletis completa*) in Butte County, California, (p. 1119); and a MOSQUITO (*Psorophora horrida*) in Jefferson Parish, Louisiana, (p. 1125).

CORRECTIONS and ADDITIONAL NOTES

See page 1148.

Continued on page 1134.

SPECIAL REPORTS

Status of the Screw-worm in the Southwest. (p. 1150).

Sawfly Population Survey (in wheat-producing areas of Montana). (pp. 1151, 1152).

Reports in this issue are for week ending September 24 unless otherwise indicated.

WEATHER OF THE WEEK ENDING SEPTEMBER 27

HIGHLIGHTS: (1) Continued cold, northern Plains. (2) Eastern heat wave broken. (3) Dry in extreme West, wet Central and East.

TEMPERATURE: Cold arctic air entered Montana again on Wednesday, September 22, and covered most of the Nation east of the Rockies by Friday. Freezing occurred in the upper Mississippi Valley, south to northern Kansas, and over much of the western interior. Numerous record low temperatures for so early in the season were reported. Omaha, Nebraska, had 31° on the 24th. The week averaged 12° to 15° cooler than normal in the upper Great Plains where this was the sixth consecutive cooler than normal week. Temperatures averaged 6° to 10° above normal in the Northeast where maximums were near 90° until late in the week. Augusta, Maine, had 92° on Wednesday.

PRECIPITATION: Precipitation was nearly all of the frontal type. A front extending from the Great Lakes to Texas during the first 3 days moved to the Atlantic coast by Friday and caused most of the week's precipitation. Totals exceeded 0.75 inch over most of the midcontinent and Appalachian areas. In the middle Mississippi Valley, many streams overflowed after 6 days of rain which ended Wednesday. The worst flooding was in Iowa, Missouri, Arkansas, and Texas. More than 8 inches fell near Austin, Texas. Beneficial rains in the northeastern drought area generally ranged from 0.5 to 1.5 inches. More snow fell in the central and northern Rockies. Some light snows were reported through the northern Plains to Upper Michigan. Precipitation west of the Divide was insignificant. It was rather stormy in the middle Mississippi Valley early in the week. Tornadoes were reported on the 20th near Wichita, Kansas; Strong City, Oklahoma; Bethany and Marshall, Missouri; and St. Joseph and Elkhart, Indiana. (Summary supplied by U.S. Weather Bureau).

CEREAL AND FORAGE INSECTS

CORN EARWORM (*Heliothis zea*) - OREGON - Damage to sweet corn heavy in Douglas, Josephine and Jackson Counties. Infestations absent or only light in corn in mid-Willamette Valley. (Larson). ARIZONA - Moderate to heavy populations continue damaging to corn in Graham County. (Ariz. Coop. Sur.). NEW MEXICO - Reported light to heavy on sweet corn in commercial plantings in Bernalillo County. (Heninger). OKLAHOMA - Reported heavy in irrigated corn grown for silage in Jackson County. Averaged 6 per 100 terminals in Marshall County peanuts; light in Payne County alfalfa. (Okla. Coop. Sur.). KANSAS - Infesting up to 95 percent of late corn in Riley, Geary, Wabaunsee and Shawnee Counties. (Simpson). NEBRASKA - Larval populations light in southeastern section; mainly confined to late corn. (Rhine). MICHIGAN - Adult numbers in blacklight traps higher for week ending September 20 than earlier; sizeable sampling taken evening of September 16. (Newman). DELAWARE - Adults remain abundant in blacklight trap collections in Sussex County; average over 100 per night. (Burbutis). MARYLAND - Larvae caused light to moderate pod injury to soybeans on lower Eastern Shore. (U. Md., Ent. Dept.). VIRGINIA - Only occasional damaged pod noted in 3 fields of soybeans in Pittsylvania County. (Dominick, Sept. 16). TENNESSEE - Some pod feeding observed on soybeans, but no larvae seen. (Johnson). ALABAMA - Heavy infestation of this species and *Anticarsia gemmatilis* (velvetbean caterpillar) controlled by insecticide application in Greene County. (Langely, Pike et al.). Infesting grain sorghum in Perry County, with serious damage noted to grain heads in all stages of development. Controls required. (Bates, Ledbetter).

FALL ARMYWORM (*Spodoptera frugiperda*) - ALABAMA - Infesting grain sorghum in Perry County; seriously damaging grain heads in all stages of development. Controls necessary. (Bates, Ledbetter). OKLAHOMA - Found in 15 percent of ears in irrigated corn in Jackson County. Light in Payne County alfalfa. (Okla. Coop. Sur.). KANSAS - Considerable number of larvae (0-10 per 25 plants) noted in late corn in northeast district; causing some breakage. (Simpson). Damaging fall-seeded rye in Pawnee County. Replanting necessary. (Brooks). OHIO - Larvae infesting some late sweet corn near Marietta, Washington County. Particularly heavy, with up to 4-5 larvae per ear. Late field corn in area also affected. Severe feeding evident on leaves and stalks. Many larvae nearing pupation. Tassels failed to develop properly due to feeding damage on much of late corn in one field. (Racer). Infestation involving 5 acres of field corn observed in Wayne County. (Barry, Rings). MARYLAND - Larvae caused heavy injury to corn planting near Clear Spring, Washington County. (U. Md., Ent. Dept.). DELAWARE - Larvae very abundant in late-planted corn in one area of Sussex County; causing very heavy injury. (Burbutis).

SORGHUM WEBWORM (*Celama sorghiella*) - ALABAMA - Infesting grain sorghum in Perry County; seriously damaged grain heads in all stages of development. Controls necessary. (Bates, Ledbetter).

SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) - OKLAHOMA - Reported infesting nearly all stalks of irrigated corn in Jackson County. (Okla. Coop. Sur.).

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - NEBRASKA - Infestations appear higher in corn in southeastern counties than in 1964. (Rhine). MICHIGAN - Percent infestation by first and second-brood larvae in 18 fields of corn sampled September 21 by county as follows: Monroe, 28 in 5 fields; Livingston, 28 in 3 fields; Saginaw, 6 in 5 fields; Tuscola, none of 5 fields infested. Larvae collected in Monroe and Livingston Counties predominantly second and third stages. (Newman). DELAWARE - Adult numbers in blacklight traps in Sussex County reduced over those reported in CEIR 15(39):1116; averaged 19 per night. (Burbutis).

CORN ROOTWORMS (*Diabrotica* spp.) - NEBRASKA - Annual adult survey shows increase of *D. undecimpunctata howardi* (southern corn rootworm) populations over those of 1964 in central and southeastern areas. Populations predominantly *D. longicornis* (northern corn rootworm) in northeast section and mainly *D. virgifera* (western corn rootworm) throughout remainder of State. (Rhine). OHIO - Mixed infestation

of D. longicornis and D. undecimpunctata howardi reported in field of clover in Franklin County. D. longicornis adults numbered approximately 5 per sweep and D. undecimpunctata howardi ranged 2-3 per sweep. (Smith).

BUMBLE FLOWER BEETLE (Euphoria inda) - WYOMING - Observed and collected from corn at Casper, Natrona County. (Ralston, Fronk). Also observed on elms at Gillette, Campbell County. (Lynch, Fronk).

WIREWORMS - MARYLAND - Unspecified species caused severe lodging of corn near Manchester, Carroll County. (U. Md. Ent. Dept.).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Light to moderate in grain sorghum checked in Payne County. (Okla. Coop. Sur.).

BEAN APHID (Aphis fabae) - OREGON - Probably this species, heavy in fields of sweet corn in Lane County. Apparently migrated from bean fields that were cut after harvest operations. (D. Hatch).

GRASSHOPPERS - NEVADA - Heavy numbers of grasshoppers, mostly Melanoplus bivittatus (two-striped grasshopper), killed by fungus and flesh flies (Sarcophagidae) in Lamoille area, Elko County. Tops of leafy spurge plants covered with fungus-killed grasshoppers. (Earnist, Maloney). ARIZONA - Survey of summer-hatching species indicates noneconomic populations in Graham and Cochise Counties, except for economic numbers in extreme southwestern Cochise County. Economic populations present in Santa Cruz and Pima Counties. Estimates of 600,000 acres infested in Santa Cruz County and 60,000 acres infested in Pima County. Melanoplus sanguinipes (migratory grasshopper) infesting alfalfa on Yuma Mesa in Yuma County; ranged 1-3 per square yard. (Ariz. Coop. Sur.). NEW MEXICO - Grasshoppers heavy in alfalfa on edges of fields in Alameda area, Bernalillo County. (Heninger). MICHIGAN - Grasshopper adults and nymphs relatively low in areas of Mecosta, Osceola and Missaukee Counties recently surveyed; exception was counts as high as 15 per square yard in isolated field. Averaged 2 per square yard in 10 fields surveyed in these counties. Melanoplus femurrubrum (red-legged grasshopper) dominant species. (Janes, Lindy). No grasshoppers found in 6 fields of alfalfa checked in Tuscola County September 21. (Dowdy).

MORMON CRICKET (Anabrus simplex) - ARIZONA - Infestation on 8,500 acres found in Pleasant Valley area on north rim of Grand Canyon in Kaibab National Forest. No females observed, indicating earlier migration for egg laying purposes. (Ariz. Coop. Sur.).

SOD WEBWORMS - IDAHO - Adults of Crambus mutabilis very abundant in lawn in Caldwell, Canyon County. (Homan, Sept. 17). OHIO - Crambus spp. reportedly serious in lawns in section of Marietta, Washington County. (Gehres). FLORIDA - Larvae of Pachyzancla phaeopteralis severely damaged St. Augustine grass at Ocala, Marion County. (Roberson, Sept. 14).

BEET ARMYWORM (Spodoptera exigua) - CALIFORNIA - Larvae heavy on leaves of Chenopodium album in North Modesto, Stanislaus County. (Cal. Coop. Rpt.).

CHINCH BUGS (Blissus spp.) - FLORIDA - B. insularis damaging St. Augustine grass pastures at Belle Glade, Palm Beach County; severe on approximately 80 acres, with many spots of 50-100 feet in diameter completely killed. More new St. Augustine grass pastures showing marginal damage; nymphs and adults present. Additional acreage showing damage estimated at approximately 300 acres. Control being obtained by use of appropriate insecticide. (Genung, Sept. 21). TEXAS - Heavy infestations of Blissus sp. reported in St. Augustine grass lawns in Travis, Harris and Brazos Counties. (Meisch).

A SPITTLEBUG (Prosapia bicincta) - ALABAMA - Adults emerging in large numbers from Coastal Bermuda grass and other grasses along highways in Lee, Macon, Montgomery and other nearby counties. (Barwood).

A THRIPS (*Chirothrips* sp.) - ARIZONA - Heavy numbers appearing in Bermuda grass seed fields in Gila Valley of Yuma County. (Ariz. Coop. Sur.).

A SNAIL (*Vallonia pulchella*) - OREGON - Reported heavy and damaging lawns in Multnomah and Lane Counties. (Larson).

PEA APHID (*Acyrtosiphon pisum*) - OHIO - Numbers very low on fourth-growth alfalfa near South Charleston, Clark County. Counts indicate less than 1 per sweep, corresponding with buildup of predator populations. Elsewhere, *A. pisum* counts varied depending on time of third cutting. Above mentioned alfalfa cut August 14. (Holdsworth). Evidence of great variation in numbers observed in alfalfa in central and southeastern sections. Populations negligible in fields in Fairfield, Tuscarawas and Carroll Counties; counts ranged from less than 1 to 3 per sweep; however, average of 44 per sweep taken in one Monroe County field. Syrphid fly larvae only predators of consequence in this field; averaged 1 and 2 per sweep. (Rose). MICHIGAN - Adult and nymphal populations in alfalfa vary among fields; relatively low numbers prevail. In 6 fields in Tuscola County, highest and lowest counts per 10 sweeps in any field on September 21 were 150 and 20 respectively. Few fields checked on same date in Monroe and Livingston Counties showed high counts. Lady beetles and damsel bugs probably kept numbers low. (Dowdy). ILLINOIS - Varied 25.6-35.2 (average 31.5) per sweep in clover and alfalfa in Champaign County. (Ill. Ins. Rpt.). WISCONSIN - Populations increasing in alfalfa; probably due to cool, wet weather. Parasites and predators scarce in most fields. (Wis. Ins. Sur.). NEW MEXICO - Light to medium in alfalfa in Dona Ana and Bernalillo Counties. (Heninger, Mathews).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - MICHIGAN - Specimens of mature apterae collected in field of alfalfa in Shiawassee County on September 7 determined as this species by L. M. Russell. This constitutes a new State record. Adults and nymphs collected September 14 in Calhoun, Branch, St. Joseph, Cass and Van Buren Counties also determined this species and are new county records. (Connin, Bath). See CEIR 15(39):1117 for additional information. (PPC). None collected in 6 fields of alfalfa checked in Tuscola County September 21. (Dowdy). WISCONSIN - Populations extremely low; average less than 1 per 50 sweeps in fields where counts fairly high one month ago. (Wis. Ins. Sur.). NEW MEXICO - Light infestations found in alfalfa in Dona Ana and Bernalillo Counties. (Heninger, Mathews).

YELLOW CLOVER APHID (*Therioaphis trifolii*) - ILLINOIS - Averaged 160 per 100 sweeps in field of red clover in Champaign County. (Ill. Ins. Rpt.).

TARNISHED PLANT BUG (*Lygus lineolaris*) - MICHIGAN - Adults in alfalfa averaged 18 per 10 sweeps in 6 fields checked in Tuscola County September 21. (Dowdy). WISCONSIN - Adults and nymphs still common in most alfalfa. Appearing darker in color than previously noted. (Wis. Ins. Sur.). ILLINOIS - Adults varied 20-80 (average 40) and nymphs 0-10 (average 3.3) per 100 sweeps in clover and alfalfa in Champaign County. (Ill. Ins. Rpt.).

ALFALFA PLANT BUG (*Adelphocoris lineolatus*) - MICHIGAN - Adults averaged 4 and nymphs 7 per 10 sweeps in 6 fields of alfalfa checked in Tuscola County September 21. (Dowdy). WISCONSIN - Adults and nymphs continue common in most alfalfa; taking on dark appearance. (Wis. Ins. Sur.).

POTATO LEAFHOPPER (*Empoasca fabae*) - ILLINOIS - Adults ranged 20-120 (average 80) and nymphs 0-40 (average 13) per 100 sweeps in alfalfa and clover in Champaign County. (Ill. Ins. Rpt.). MICHIGAN - Adults averaged 5.6 and nymphs 2.4 per 10 sweeps in 6 fields of alfalfa checked in Tuscola County September 21. (Dowdy). VIRGINIA - Nymphs and adults heavy in 2 fields of alfalfa in Carroll County; averaged 25 per 10 sweeps. (Isakson).

THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) - TEXAS - Damaged several fields of soybeans in Bowie County. (Lynch). NEW MEXICO - Counts of 10-15 per 25 sweeps reported in alfalfa in Dona Ana County. (Mathews).

MEADOW SPITTLEBUG (Philaenus spumarius) - MICHIGAN - Averaged 6.3 adults per 10 sweeps in alfalfa in 6 Tuscola County fields checked. (Dowdy).

STINK BUGS - TENNESSEE - Abundant in most fields of soybeans observed. Most beans far enough advanced that little damage will occur. (Johnson). NORTH CAROLINA - Several species noted in 7 fields of soybeans in Wilson and Edgecombe Counties; averaged 7.5 adults and 11 nymphs per 50 feet of row. In 9 fields in Pitt and Craven Counties, adults averaged 4 and nymphs 3 per 50 feet of row. (Mount).

ALFALFA CATERPILLAR (Colias eurytheme) - NEW MEXICO - Larvae ranged 20-30 per 25 sweeps in alfalfa in Dona Ana County. Adults reported heavy in some Bernalillo County fields. (Mathews, Heninger). ARIZONA - Larvae again increasing in alfalfa in Maricopa and Pinal Counties; averaged 65 per 100 sweeps. Damage appears moderate. (Ariz. Coop. Sur.).

GREEN CLOVERWORM (Plathypena scabra) - VIRGINIA - Small numbers found in 3 fields of soybeans checked in Pittsylvania County September 16. (Dominick).

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - ALABAMA - Full-grown larvae well controlled by virus disease in 2 fields of soybeans in Covington County. Larvae died and deteriorated while tightly attached to plant stems. (Langely, Pike et al.).

CUTWORMS - VIRGINIA - Severely damaged field of alfalfa in Botetourt County; cut off plants at ground level. (Isakson, Leonard, Sept. 18).

RED-NECKED PEANUTWORM (Stegasta bosqueella) - OKLAHOMA - Averaged 33 per 100 terminals in peanuts checked in Marshall County. (Okla. Coop. Sur.).

ALFALFA WEEVIL (Hypera postica) - UTAH - Growers in Duchesne County estimated approximately 25-percent loss of first crop alfalfa, plus damage to and much delay of regrowth of second crop. (Smith, Knowlton). OHIO - After being scarce during August and early September, adults apparently becoming more active during daylight hours; previous activity primarily at night. Averaged 1 per sweep in field of alfalfa near Port Washington, Tuscarawas County, and ranged 2-6 per 10 sweeps in fields in Carroll and Monroe Counties. (Rose). VIRGINIA - Larvae averaged 8 per 20 sweeps in field of alfalfa in Carroll County. No larvae or adults encountered in fields checked in Bedford, Amherst, Nelson and Buckingham Counties. (Isakson).

CLOVER LEAF WEEVIL (Hypera punctata) - ILLINOIS - Adults ranged 0-40 (average 13.3) in clover and alfalfa in Champaign County. (Ill. Ins. Rpt.).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - ILLINOIS - Averaged 13 per 100 sweeps in field of red clover in Champaign County. (Ill. Ins. Rpt.).

BEAN LEAF BEETLE (Cerotoma trifurcata) - ILLINOIS - Adults varied 0-80 (average 46.7) per 100 sweeps in clover and alfalfa in Champaign County. (Ill. Ins. Rpt.). VIRGINIA - Caused light to medium damage to soybean foliage in 3 Pittsylvania County fields. (Dominick, Sept. 16).

MEXICAN BEAN BEETLE (Epilachna varivestis) - VIRGINIA - Caused light to medium damage to foliage of soybeans in 3 fields checked in Pittsylvania County. (Dominick, Sept. 16). ALABAMA - Feeding signs plentiful on kudzu throughout much of central section; however, damage not serious. (Barwood et al.).

BLISTER BEETLES (Epicauta spp.) - OKLAHOMA - Infestations moderate in alfalfa in Mayes County; light in Payne County. (Okla. Coop. Sur.).

FRUIT INSECTS

SPIDER MITES (Tetranychus spp.) - UTAH - Discoloring apple foliage in home orchards near Logan, Cache County. (Knowlton). OREGON - Overwintering forms of T. telarius (two-spotted spider mite) beginning to hibernate in Jackson County. (Berry).

LEAFHOPPERS - CALIFORNIA - Adults of Empoasca abrupta (western potato leafhopper) and Draeculacephala minerva medium on peach trees in Riverbank, Stanislaus County. (Cal. Coop. Rpt.).

PEACH TWIG BORER (Anarsia lineatella) - OREGON - Larvae boring into peach twig crotches and forming hibernaculae in Jackson County. (Berry).

APPLE RED BUG (Lygidea mendax) - OHIO - Probably this species, caused prominent catfacing on all apple varieties except Grimes Golden in orchard near Worthington, Franklin County. (Smith).

FRUIT FLIES (Rhagoletis spp.) - CALIFORNIA - R. completa (walnut husk fly) medium in walnuts in Knights Landing, Yolo County, and Auburn, Placer County. Up to 100 percent infestation of dooryard walnuts in Sacramento, Sacramento County. Yolo and Placer Counties new county records. (Cal. Coop. Rpt.). UTAH - R. completa found in walnuts at Tooele, Tooele County. (Knowlton). MICHIGAN - Species reported in CEIR 15(36):1036 as Rhagoletis sp. determined as R. suavis by G. C. Steyskal. Limited adult activity continued in Carpathian walnut planting in Gratiot County. (Newman, Sommers).

PECAN WEEVIL (Curculio caryae) - OKLAHOMA - Eggs hatching in nuts in Creek and Okfuskee Counties. Adult emergence continues heavy in Payne County. Reported moderate on pecans in Choctaw and Bryan Counties and light in Mayes County. (Okla. Coop. Sur.).

HICKORY SHUCKWORM (Laspeyresia caryana) - OKLAHOMA - Continues to damage pecans in Creek and Okfuskee Counties. (Okla. Coop. Sur.).

WALNUT CATERPILLAR (Datana integerrima) - TEXAS - Damaging pecan trees in Hamilton County. (Gordon).

SPITTLEBUGS - SOUTH CAROLINA - Majority of pecan trees infested in Florence County. (Nettles et al., Sept. 22).

ORANGE-DOG (Papilio cresphontes) - TEXAS - Damaging grapefruit trees in Runnels County. (Parker).

Citrus Insect Situation in Florida - Mid-September - CITRUS RUST MITE (Phyllocop-truta oleivora) infested leaves in 45 percent of groves (norm 56 percent); 28 percent economic (norm 36 percent); and infested fruit in 53 percent of groves (norm 67 percent); 35 percent economic (norm 45 percent). Although statewide population below average and in moderate range there are wide differences among districts and all areas have at least 8 percent of groves with heavy infestations. Increase underway which will continue through October. Highest districts south, west and central. CITRUS RED MITE (Panonychus citri) infested 15 percent of groves (norm 38 percent); 3 percent economic (norm 18 percent). Decreased to very low level; the lowest on record for September and near the lowest recorded in 15 years of observation. All districts expected to remain in low range. TEXAS CITRUS MITE (Eutetranychus banksi) infested 15 percent of groves (norm 23 percent); 2 percent economic (norm 8 percent). Currently very low in all districts; gradual increase expected. BLACK SCALE (Saissetia oleae) infested 46 percent of groves (norm 34 percent); 25 percent economic (norm 14 percent). Decreasing but still above average for September. A few heavy infestations present in highest districts; central, east and north. GLOVER SCALE (Lepidosaphes gloverii) infested 41 percent of groves; 7 percent economic. Above average but all districts are low. Increase expected. PURPLE SCALE (Lepidosaphes beckii)

infested 35 percent of groves; none economic. Currently at lowest level in 15 years of record. YELLOW SCALE (Aonidiella citrina) infested 37 percent of groves; 9 percent economic. Above average; all districts low; little change expected. CHAFF SCALE (Parlatoria pergandii) infested 28 percent of groves; 2 percent economic. Below average; increase expected; all districts low. WHITEFLY adults infest 74 percent of groves, 11 percent moderate to heavy. Larvae infest 55 percent of groves, 5 percent moderate to heavy. Larvae below average but expected to reach moderate level about October 1. (W. A. Simanton, (Citrus Expt. Sta., Lake Alfred)).

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - Chemical Control Zone - Surveys in States of Sonora, Baja California and Nuevo Leon negative; 1 very light infestation found in Tamaulipas. Over 3,400 trees sprayed on 3 properties in Nuevo Leon and 2 applications made on 536 trees on 1 property at Hermosillo, Sonora. Biological Control Zone - Heavy infestations found in States of Michoacan, Sonora and Tabasco. Majority of trees in States of Nayarit, Aguascalientes, Guanajuato, Puebla and Jalisco and the Territory of Baja California uninfested or lightly infested. About 3 percent of trees inspected in southern Tamaulipas State lightly infested. Parasite population in Yucatan and Campeche States sufficient to provide for release on 58 properties requiring controls. (PPC Mex. Reg., Aug. Rpt.). TEXAS - Surveys negative in Mission and other locations in Hidalgo and Zavala Counties. (PPC So. Reg., Aug. Rpt.).

A FRUIT FLY (Myoleja limata) - FLORIDA - Adults of this native species light on kumquat at Orlando, Orange County. (Castor, Sept. 7).

RED DATE SCALE (Phoenicoccus marlatti) - ARIZONA - Very heavy in date grove in Yuma County; causing severe reduction in yield. (Ariz. Coop. Sur.).

EUROPEAN RED MITE (Panonychus ulmi) - OHIO - Overwintering eggs common on Concord grapes in eastern section following rapid buildup in early September. Heavier populations caused some bronzing of grape foliage. (Still).

GRAPE BERRY MOTH (Paralobesia viteana) - OHIO - Second-generation larvae causing heavy damage to poorly sprayed and unsprayed vineyards in eastern section. (Still).

A LEAF ROLLER MOTH (Platynota stultana) - CALIFORNIA - Larvae damaging rasins on drying trays in vineyards in Fresno County; this first time this has been noticed. (Cal. Coop. Rpt.).

VINEGAR FLIES (Drosophila spp.) - MICHIGAN - Adults likely to cause problems on grapes and other susceptible crops in southwestern section if warm weather continues. (Wooley).

A VESPID WASP (Vespula maculifrons) - OHIO - Feeding on grapes and apples in Plain City, Madison County. (Gibson).

TRUCK CROP INSECTS

CABBAGE LOOPER (Trichoplusia ni) - DELAWARE - Adults increased greatly in light trap collections in Sussex County; averaged over 30 per night. (Burbutis).

NORTH CAROLINA - Larvae still active on cabbage and adults still numerous in light traps in Watauga County. (Wray). ARIZONA - Larvae light on lettuce in Peoria area, Maricopa County; small numbers reported in Dome Valley area, Yuma County. (Ariz. Coop. Sur.).

IMPORTED CABBAGEWORM (Pieris rapae) - NEW MEXICO - Caused considerable damage to heads of cabbage and leaves of cauliflower. (Heninger). ALABAMA - Larvae medium to heavy on collards in home gardens in Lee and Macon Counties. (Barwood).

TOMATO FRUITWORM (Heliothis zea) - DELAWARE - Larvae abundant in some bean fields in Kent and Sussex Counties. (Burbutis).

EUROPEAN CORN BORER (Ostrinia nubilalis) - DELAWARE - Larvae rather abundant in some snap bean plants and pods and present in some peppers in Sussex County. (Burbutis). ALABAMA - Occasional larva noted in maturing pimento peppers in Marshall and De Kalb Counties. (Davis).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Heavy locally and damaging southern peas in Young County. (MacCarroll).

POTATO TUBERWORM (Gnorimoschema operculella) - UTAH - Extremely scarce in potatoes in Beaver, Iron and Washington Counties. (Knowlton, Sjoblom).

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - Heavy and damaging lettuce in Dome Valley area, Yuma County. (Ariz. Coop. Sur.).

FLEA BEETLES - ARIZONA - Migrating populations of Chaetocnema ectypa (desert corn flea beetle) and Systema sp. damaging young lettuce in Yuma County and vegetables in some areas of Maricopa County. (Ariz. Coop. Sur.). PENNSYLVANIA - Systema blanda (pale-striped flea beetle) damaged garden in Greene County. (Udine).

CUCUMBER BEETLES - OKLAHOMA - Diabrotica undecimpunctata howardi (spotted cucumber beetle) and Acalymma vittata (striped cucumber beetle) heavy on commercial cucumbers in Jackson County. Some controls applied. (Okla. Coop. Sur.).

JAPANESE BEETLE (Popillia japonica) - NORTH CAROLINA - Adults feeding on late beans and weeds in home garden in Watauga County. (Wray).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - RHODE ISLAND - Adults common in vicinity of fields and around houses near fields in West Kingston, Washington County. (Mathewson).

APHIDS - ALABAMA - Hyadaphis pseudobrassicae light to heavy on fall turnips in home gardens in central and northern sections. Some controls necessary. (Amason et al.). OHIO - Myzus persicae (green peach aphid) populations continue high on potato plants near Celeryville, Huron County, although controls used. (Sleesman). OKLAHOMA - Several species heavy in home gardens in Choctaw and McCurtain Counties. (Okla. Coop. Sur.). NEW MEXICO - Brevicoryne brassicae (cabbage aphid) light to medium on cabbage and cauliflower in Bernalillo County. Aphis gossypii (melon aphid) light to heavy on cantaloups and honeydew melons in commercial plantings in southern Bernalillo County. (Heninger).

GREENHOUSE WHITEFLY (Trialeurodes vaporariorum) - IDAHO - Heavy on strawberry plants in home garden at Nampa, Canyon County. (Homan).

POTATO LEAFHOPPER (Empoasca fabae) - CALIFORNIA - Medium in blackeyed peas in Friant, Fresno County. (Cal. Coop. Rpt.).

CABBAGE MAGGOT (Hylemya brassicae) - OHIO - Larvae severe inside heads and roots of some Chinese cabbage near Orient, Pickaway County. (Holdsworth).

FIELD CRICKETS (Gryllus spp.) - ARIZONA - Populations continue high in vegetable crops in Yuma County. Controls have been necessary. (Ariz. Coop. Sur.).

SPIDER MITES (Tetranychus spp.) - OKLAHOMA - Continue to damage tomatoes in home gardens in Payne County. (Okla. Coop. Sur.).

COTTON INSECTS

BOLLWORM (Heliothis zea) - OKLAHOMA - Infestations range 25-32 percent on Jackson County cotton. Reported light in Beckham and Marshall Counties. (Okla. Coop. Sur.). NEW MEXICO - Mostly light infestations reported in cotton in Dona Ana,

Luna and Hidalgo Counties; heavier populations found in some instances. (Mathews, Hare). ARIZONA - Damage to top crop evident in scattered areas of Graham, Yuma, Maricopa, Pinal and Pima Counties. Controls necessary and considered generally effective. (Ariz. Coop. Sur.). CALIFORNIA - More abundant on cotton in northern part of valley in Imperial County, although egg deposition apparently increased in southern portion. Little if any controls required in many fields this season, although some outbreaks did occur. (Campbell, Sept. 16). Generally abundant in cotton in Kings County where certain insecticides used earlier. (McCutcheon, Sept. 17). Dominant situation in San Joaquin Valley in many fields of cotton, with severe infestations evident in portions of Tulare, Fresno, Kings and Kern Counties. Larvae evident throughout valley; populations low in many instances but larvae range 80-90 per 100 plants in some fields. Moth activity continues at light traps in Shafter; presumably, infestations may continue to develop for another 2-3 weeks. (Leigh, Sept. 17).

CABBAGE LOOPER (Trichoplusia ni) - OKLAHOMA - Moths and eggs numerous in Jackson County cotton but larvae seldom found. Most larvae being killed by virus. (Okla. Coop. Sur.). CALIFORNIA - Evident in cotton throughout San Joaquin Valley with considerable ragging of leaves evident in many fields; however, economic situations apparently rare. (Campbell, Sept. 16).

SALT-MARSH CATERPILLAR (Estigmene acrea) - ARIZONA - Scattered infestations found in cotton in Yuma, Maricopa, Pinal, Pima and Graham Counties. Damage light in most instances. (Ariz. Coop. Sur.). CALIFORNIA - Evident in cotton in Tulare Lake area of Tulare County, but infestations generally light. (Leigh, Sept. 17).

PINK BOLLWORM (Pectinophora gossypiella) - OKLAHOMA - Lint cleaner inspections negative in Beckham, Custer, Harmon, Jackson, Payne, McClain, Garvin and Coal Counties. One of two inspections in Muskogee County and 1 of 2 in Tillman County positive. Gin trash inspections positive in Harmon, Tillman and Logan Counties. All averaged less than 1 larva per bushel of gin trash. (Okla. Coop. Sur.). ARIZONA - Infestations being found in cotton in many areas of Maricopa County. (Ariz. Coop. Sur.).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - ARIZONA - Populations declined in Yuma area cotton; however, new infestations continue to be found. (Ariz. Coop. Sur.). CALIFORNIA - Increased populations in some Imperial Valley fields required controls; however, populations and damage minimal in most instances. (Campbell, Sept. 16).

ARCTIID MOTHS - OKLAHOMA - Larvae of several species averaged 1 per 5 row feet in cotton checked in Jackson County. (Okla. Coop. Sur.).

BOLL WEEVIL (Anthonomus grandis) - ALABAMA - Adults, larvae and pupae observed in large numbers in top bolls and squares in fields of cotton checked in Madison, Limestone, Lawrence and Cullman Counties. (McQueen). OKLAHOMA - Infestation averaged 41 percent in untreated cotton in Marshall County; ranged 40-80 percent in Jackson County and 2-10 percent in Beckham County. Reported moderate in Choctaw County cotton. (Okla. Coop. Sur.). TEXAS - Light to heavy, widespread infestations present in cotton in Cottle County. (Meisch).

COTTON APHID (Aphis gossypii) - NEW MEXICO - Heavy in some fields of cotton in Dona Ana County, but generally reported as light. (Mathews). CALIFORNIA - Evident in most cotton throughout San Joaquin Valley; however, activity of beneficial insects appears to have controlled some severe outbreaks. A. gossypii should be watched for buildups where bolls open and honeydew may be deposited on fibers. (Leigh, Sept. 17). Still present in many fields of cotton in Kings County; serious infestations not yet evident. Infested fields should be checked frequently to detect excessive honeydew on lint. Lacewings abundant in most fields where aphids present. (McCutcheon, Sept. 17).

LYGUS BUGS (Lygus spp.) - CALIFORNIA - Population variable in Imperial County cotton; numbers economic in some fields, but populations generally low. (Campbell, Sept. 16). Although infestations still present in some San Joaquin Valley fields, value of controls doubtful at this time. (Leigh, Sept. 17).

CRICKETS - CALIFORNIA - Continue abundant in Imperial County cotton, although decreasing. Plants in some fields being "topped" as result of feeding by these pests. (Campbell, Sept. 16).

SPIDER MITES (Tetranychus spp.) - ALABAMA - Defoliation of cotton plants quite widespread throughout northern part of State; infestations range light to medium. Infestations heavy in some fields and in isolated areas of most fields. Damage uncertain as cotton maturing and harvest well underway in much of the area. (McQueen). CALIFORNIA - Abundant in many fields of cotton in San Joaquin Valley with reddening of leaves and some webbing of upper portions of plants evident. Not causing economic losses at present. Predators abundant in mite colonies. (Leigh, Sept. 17).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - TEXAS - Total of 195 spots located by aerial detection made over epidemic area during August in Hardin, Harris, Jasper, Liberty, Montgomery, Newton, Orange, Polk and Tyler Counties. Some activity found in trees previously attacked by Ips spp. Damage decreasing on Big Thicket Ranger District in San Jacinto County. Control applied. (Texas For. Pest Comm., Aug. Rpt., Williamson).

BLACK TURPENTINE BEETLE (Dendroctonus terebrans) - TEXAS - Control applied on Davy Crockett National Forest to prevent population buildup. Damage constant on scattered trees in logging and site-preparation areas. Mortality reported from Rusk County where no control yet applied. (Texas For. Pest Comm., Aug. Rpt., Williamson).

PONDEROSA-PINE CONE BEETLE (Conophthorus ponderosae) - CALIFORNIA - Damage to ponderosa pine seed cones heavy in Lava seed production area and Round Mountain area in Modoc National Forest. (K. Smith, USFS).

WHITE GRUBS (Phyllophaga spp.) - WISCONSIN - Caused 70-80 percent loss in untreated Christmas tree plantation in Dane County. (Wis. Ins. Sur.)

POPLAR-AND-WILLOW BORER (Sternochetus lapathi) - IDAHO - Severely infesting globe willows locally in Caldwell. (Homan, Sept. 17).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - UTAH - Generally moderate, but very severe on few blue spruce trees at Logan, Cache County. (Knowlton). VIRGINIA - Attacking pines locally in Appomattox County. (Isakson, Smith).

PINE SAWFLIES (Neodiprion spp.) - TEXAS - Partial defoliation of loblolly and shortleaf pines noted in Bastrop, Polk, Rusk and Trinity Counties. Sawtimber-sized trees attacked. Damage this season resulted in widespread light defoliation; however, these areas to be kept under surveillance. (Texas For. Pest Comm., Aug. Rpt., Williamson).

FALL WEBWORM (Hyphantria cunea) - NEW MEXICO - Medium to heavy on poplars, pecans and cottonwoods in Dona Ana and Sierra Counties. (Mathews). OKLAHOMA - Moderate to heavy on several species of trees in northeast and east central areas. (Okla. Coop. Sur.). KANSAS - Numerous in southeast district although not as heavy as in northeast September 17. Numbers in northeast on decline. (Simpson). ARKANSAS - Larvae still active in many nests in Ozark Mountains. Many specimens of Elachertus hyphantriae (a eulophid wasp), an important parasite of this species, collected. (Boyer).

WALKINGSTICK (Diapheromera femorata) - ARKANSAS - None found in areas heavily infested past few years. Only an occasional specimen found this season. (Boyer).

ELM LEAF BEETLE (Galerucella xanthomelaena) - OKLAHOMA - Heavy on elms in Adair, Hughes and Mayes Counties. Larvae of a partial fourth generation hatched in Payne County. (Okla. Coop. Sur.). TEXAS - Heavy and widespread on elms in State. Reported from El Paso, Pecos and Bowie Counties as well as most counties in northwest area. These are new county records. (Texas Coop. Rpt.).

A SPHINGID MOTH (Pachysphinx modesta) - CALIFORNIA - Heavy larval infestations on ash trees in Victorville, San Bernardino County. (Cal. Coop. Rpt.).

LEAFHOPPERS - OKLAHOMA - Moderate to heavy on sycamores in Payne County and on elms in Noble County. (Okla. Coop. Sur.). CALIFORNIA - Adults of Opsius stactogalus heavy on tamarisk trees in Yuba City, Sutter County. (Cal. Coop. Rpt.).

APHIDS - UTAH - Pterocomma sp. very numerous on black willow twigs at Ogden, Weber County. (Knowlton). WISCONSIN - Cinara spp. numerous on various pine

species in a Dane County Christmas tree plantation. (Wis. Ins. Sur.). VIRGINIA - Longistigma caryae (giant bark aphid) heavy on pin oak in Berryville, Clarke County. (Isakson, Gerken).

BAGWORM (Thyridopteryx ephemeraeformis) - OKLAHOMA - Moderate on "cedars" in local areas of Beckham County. Males emerged in Payne County. (Okla. Coop. Sur.). ALABAMA - Pupation of single generation occurring over State; mating underway. (McQueen).

MIMOSA WEBWORM (Homadaula albizziae) - MARYLAND - Heavy on mimosa trees at several locations in Prince Georges County. (U. Md., Ent. Dept.).

A TORTRICID MOTH (Choristoneura houstonana) - KANSAS - Overwintering in hibernaculæ as fourth or fifth instars at Larned. (Simpson).

LACE BUGS - CALIFORNIA - Adults of Leptocypha minor heavy on Arizona ash trees in Escalon, San Joaquin County. (Cal. Coop. Rpt.). TEXAS - Undetermined species moderate to heavy on pyracantha in Denton County (Turney) and on sycamore in Brazos County (Meisch). OKLAHOMA - Corythucha ciliata (sycamore lace bug) heavy on sycamores in Payne County. (Okla. Coop. Sur.).

COCCIDS - FLORIDA - Icerya purchasi (cottony-cushion scale) caused moderate to severe damage to Pittosporum sp. in nursery at Sharpes, Brevard County, September 17. (Levan). Gymnaspidium aechmeae moderately damaging leaves of Billbergia sp. at Cypress Gardens, Polk County, September 16. (Sloan). ALABAMA - Considerable infestations of Eriococcus azaleae (azalea bark scale) noted on azaleas in Clay County. (Owens). CALIFORNIA - Aspidiotus aesculi heavy on cottonwood trees in Yucca Valley, San Bernardino County. Antonina pretiosa and Odonaspis penicillata medium on palm tree nursery stock in Visalia, Tulare County. Ferrisia virgata (striped mealbug) locally heavy on lantana plants in Brawley, Imperial County; this species under eradication treatments in county. Dysmicoccus ryani heavy on juniper nursery stock in Danville, Contra Costa County. Diaspis boisduvalii heavy on orchid nursery stock in San Jose, Santa Clara County. (Cal. Coop. Rpt.).

THRIPS - ALABAMA - Tremendous numbers occurring on isolated plantings and groups of plantings of spider lilies in Lee County. Many blossoms ruined in few days by excessive feeding. (McQueen).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - ALABAMA - Population increase noted, especially in shaded areas around homes in Lee and Macon Counties. (Barwood et al.). OKLAHOMA - Mosquito adults heavy in Bryan and Blaine Counties. (Okla. Coop. Sur.). UTAH - Annoyance decreased since frost and cold weather. (Knowlton). NEW MEXICO - Very annoying in cotton fields in southern Dona Ana County. (N. M. Coop. Rpt.).

A BLACK FLY (Simulium vittatum) - PENNSYLVANIA - Heavy and annoying man and animals over Warren County. Some reports of bites. (Adams).

HORN FLY (Haematobia irritans) - OKLAHOMA - Average per head as follows: 100 on bulls, 20 on steers and 15 on cows shortly after rain in Payne County. Ranged 300-400 per head on cows in Noble County 2 days after rain. Heavy in Mayes County and moderate in Hughes and Bryan Counties. (Okla. Coop. Sur.).

HORSE FLIES (Tabanus spp.) - OKLAHOMA - Heavy on cattle in Choctaw County; light in Noble County. (Okla. Coop. Sur.).

HOUSE FLY (Musca domestica) - OKLAHOMA - Moderate to heavy around homes and barns in Blaine, Hughes and McCurtain Counties. Counts up slightly in Payne County. (Okla. Coop. Sur.). IDAHO - High populations a nuisance in Caldwell area. (Homan, Sept. 17). More abundant in Moscow area than observed in last 20 years. Nuisance in buildings and houses and severely annoying cattle. (Manis).

BLACK WIDOW SPIDER (Latrodectus mactans) - NEVADA - Of concern to homeowners as cool weather caused movement into and around buildings in Reno-Sparks area of Washoe County. (Coop. Rpt.). NEW MEXICO - Heavy populations of spiders and eggs observed in horse stalls and tackrooms at race track in southern Dona Ana County. (Mathews, Hare, Campbell).

BROWN DOG TICK (Rhipicephalus sanguineus) - OKLAHOMA - Infesting several homes in Payne County. (Okla. Coop. Sur.).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Populations continue heavy on cattle in McCurtain County. (Okla. Coop. Sur.).

DOG FOLLICLE MITE (Demodex canis) - OKLAHOMA - Caused demodectic mange on dogs in Noble County. (Okla. Coop. Sur.).

A SCOLIID WASP (Scolia dubia) - ALABAMA - Large numbers on fairways of country club in Morgan County annoying golfers. Apparently seeking larvae of Cotinis nitida (green June beetle) for oviposition. Det. by E. U. Balsbaugh. (Robertson).

SADDLEBACK CATERPILLAR (Sibine stimulea) - ALABAMA - Several reports of "stinging" children. Larvae on ornamental shrubs and shade trees around homes. (McQueen).

FLEAS (Ctenocephalides spp.) - RHODE ISLAND - House infestations reported in Kingston and Narragansett, Washington County; and in Lincoln, Cranston and Providence in Providence County. (Veilleux, King, Mathewson). PENNSYLVANIA - Numerous complaints of mainly C. felis in basements and yards in eastern part of State. Very annoying. (Gesell). NORTH CAROLINA - Noted in yard and buildings of a Burke County school. (Speas, Mount).

HOUSEHOLD AND STRUCTURAL INSECTS

MILLIPEDS - KANSAS - Invading homes in White City, Morris County. (Brooks). WISCONSIN - These and crickets reported as main pests in scattered areas of State. Of concern in houses. (Wis. Ins. Sur.). MICHIGAN - More than usual problems with millipeds and sowbugs. (Kidd, Janes). RHODE ISLAND - Numerous in cellar of house in Kingston, Washington County. (Mathewson, Sept. 17). VIRGINIA - Large numbers in home in Grundy, Buchanan County. (Isakson, Abbott, Sept. 20).

SOWBUGS - MARYLAND - Numerous in basements of several homes in Montgomery and Prince Georges Counties. (U. Md., Ent. Dept.).

NORTHERN MOLE CRICKET (Gryllotalpa hexadactyla) - NORTH CAROLINA - Annoying around homes in areas of Franklin and Johnston Counties, September 18-21. (Wray).

CRICKETS - MICHIGAN - Numerous reports of household annoyance in southern counties. (Janes). NEVADA - Nymphs continue to invade yards and homes in northwest Reno, Washoe County. Some damage to clothing in homes. (Coop. Rpt.).

BOXELDER BUG (Leptocoris trivittatus) - MARYLAND - Noted locally at Morningside, Prince Georges County. (U. Md., Ent. Dept.). UTAH - Entering homes in areas of Cache and Box Elder Counties. (Knowlton).

CASEMAKING CLOTHES MOTH (Tinea pellionella) - TEXAS - Heavy local infestation in homes in Cherokee County. (Harris).

STORED-PRODUCT INSECTS

CONFUSED FLOUR BEETLE (Tribolium confusum) - ARIZONA - This species heavy and Sitophilus oryzae (rice weevil) present in stored feed on ranch near Scottsdale, Maricopa County. (Ariz. Coop. Sur.).

BENEFICIAL INSECTS

LADY BEETLES - NEW MEXICO - Abundant and feeding on Aphis gossypii (melon aphid) in cantaloup and melon fields in Bernalillo County. (Heninger). Generally light in cotton and alfalfa in southern counties. (Hare, Mathews). ILLINOIS - Adults varied 0-60 (average 33) per 100 sweeps in clover and alfalfa in Champaign County. (Ill. Ins. Rpt.). MICHIGAN - Adults of various species ranged 0-12 and averaged 4 per 10 sweeps in 6 alfalfa fields in Tuscola County, September 21. (Dowdy).

DAMSEL BUGS - NEW MEXICO - Generally light in cotton and alfalfa in southern counties. (Hare, Mathews). MICHIGAN - Adults ranged 1-12 and averaged 5 and nymphs ranged 0-1 and averaged 0.3 per 10 sweeps in 6 alfalfa fields in Tuscola County, September 21. (Dowdy). ILLINOIS - Nabis spp. varied 60-180 (average 120) per 100 sweeps in alfalfa and clover in Champaign County. (Ill. Ins. Rpt.).

LACEWINGS - NEW MEXICO - Eggs noted in all fields checked in Luna and Hidalgo Counties. (N. M. Coop. Rpt.).

SYRPHID FLIES - NEW MEXICO - Larvae abundant and feeding on Aphis gossypii (melon aphid) in cantaloup and melon fields in Bernalillo County. (Heninger).

A PARASITIC WASP - NEW MEXICO - Abundant and attacking Aphis gossypii (melon aphid) in cantaloup and melon fields in Bernalillo County. (Heninger).

Beneficial Insects in Cotton in California - Abundance variable in Imperial County cotton depending upon chemical treatments in fields. Geocoris spp. (big-eyed bugs) generally abundant. Collops spp. (melyrid beetles), Chrysopa spp. (green lacewings) and anthocorid bugs less abundant. Sinea confusa (an assassin bug) and spiders abundant in some fields of cotton in county. In one field, what appeared to be threat by Heliothis zea (bollworm), apparently checked by beneficial insects, mainly spiders. (Campbell, Sept. 16). Chrysopa spp. continue very abundant in most areas of San Joaquin Valley; anthocorid bugs and Collops spp. generally very abundant; however, these insects noticeably absent in some fields. (Leigh, Sept. 17). Lacewings abundant in most fields in Kings County where aphids present in cotton. Beneficial insects generally low in fields where certain controls applied. (McCutcheon, Sept. 17).

MISCELLANEOUS INSECTS

JAPANESE BEETLE (Popillia japonica) - OHIO - Heavy larval infestations reported in vicinities of Ravenna, Portage County, and Boston Hills, Summit County. (Custer, Sheppard). Single adult finds made at Carbon Cliff, Rock Island County, ILLINOIS; and at North Vernon, Jennings County, and Marion, Grant County, INDIANA. Adults found at Hanover, Jefferson County, Indiana, are a new county record. Treatment completed on total of 4,915 acres along expressways and toll roads in Chicago area of Illinois; and a total 155 acres in Louisville, Lexington and Henderson, KENTUCKY. (PPC Cent. Reg., Aug. Rpt.).

WHITE-FRINGED BEETLES - (Graphognathus spp.) - New county records are Clay County, ALABAMA; St. Landry and Ouachita Parishes, LOUISIANA; and Marshall County, MISSISSIPPI. New infested areas found in Blount, Calhoun, Cleburne, Colbert, Etowah, Lee, Madison, Morgan, Shelby, Talladega, Tallapoosa, Tuscaloosa and Walker Counties of Alabama. Initial infestations found in towns of Marion and Vincent, Crittenden County, ARKANSAS. Extensions of infested areas found in Escambia, Gadsden, Jefferson, Leon, Okaloosa, Santa Rosa and Washington Counties, FLORIDA; Berrien, Bulloch, Candler, Coffee, Decatur, Jefferson, Laurens, Meriwether, Pulaski, Richmond, Seminole and Worth Counties, GEORGIA; Greene, Hamilton, Hardeman, Roane, Tipton and Weakley Counties, TENNESSEE; and in Lafayette and St. James Parishes, Louisiana. Light general infestation found on Avery Island, Iberia Parish, Louisiana. (PPC South. Reg., Aug. Rpt.).

CORRECTIONS

CEIR 15(12): 232 - BLUEBERRY, CRANBERRY AND CURRANT INSECTS - Paragraph 2, line 9 - *Contarina vaccinii* should read *Contarinia vaccinii*.

CEIR 15(13): 265 - Second paragraph, line 10 - SUGAR-BEET ROOT MAGGOT (*Tenanops mycpaeformis*) should read (*Tetanops myopaeformis*).

CEIR 15(37): 1057 (DETECTION) and 1080 - A BROWN SPIDER (*Loxosceles reclusa*) - ILLINOIS - Should read Red Bud, Randolph County.

CEIR 15(39): 1113 (DETECTION) - Delete entire section. Substitute corrected detection appearing on page 1134 of CEIR 15(40).

CEIR 15(39): 1113 - SPECIAL REPORTS - Some Observations on the Biological Control of Alfalfa Weevil in Western Massachusetts (p. 1134) should read (p. 1131).

CEIR 15(39): 1129 - SOUTH DAKOTA - Line 6 - SOUTHERN CORN ROOTWORM (*Diabrotica longicornis*) should read NORTHERN CORN ROOTWORM (*D. longicornis*).

ADDITIONAL NOTES

SOUTH DAKOTA - Adults of WESTERN CORN ROOTWORM (*Diabrotica virgifera*) present in reduced numbers compared with previous weeks; averaged 1 per stalk in field of corn sampled in Hutchinson County. NORTHERN CORN ROOTWORM (*D. longicornis*) averaged 2 per stalk in corn sampled in Hutchinson and Yankton Counties. *D. longicornis* averaged 25 adults per 100 sweeps in grass and weeds at edge of field of corn in Hutchinson County. CORN EARWORM (*Heliothis zea*) infested 40 percent of mature corn ears in Yankton County field; larvae in third to fifth instars. EUROPEAN CORN BORER (*Ostrinia nubilalis*) infested 20 percent of ears in field of corn near Menno, Hutchinson County; second and third-stage larvae numbered 2-6 per infested cob. (Jones). Grasshopper survey for week ending September 20 showed numbers mostly non-economic in western Pennington and Lawrence Counties, with few areas of light infestation. *Melanoplus dawsoni*, *Camnula pellucida* (clear-winged grasshopper) and *M. bivittatus* (two-striped grasshopper) were species present. (Burge, Zimmerman). HORN FLY (*Haematobia irritans*) averaged approximately 150 per side on cows in herd checked near Ideal, Tripp County. (Jones).

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation inches	Type of trap	Agro- type	Blacklight or mercury vapor	Carposa pomonella (feeding moth)	Chorizandra auxillaris (army cutworm)	Serphocampa (salt-marsh caterpillar)	Parotia diffusa (wheat head armyworm)	Belictia vittata (granary cutworm)	Heliothis virescens (tobacco budworm)	Zeuzer (bollworm, corn armworm, tomato worm)	Loxostege compositella (alfalfa webworm)	Loxostege sticticalis (garden webworm)	Loxostege sticticalis (beet webworm)	Ostrinia subtile (European corn borer)	Periphranta cincta (variegated cutworm)	Pyrausta nubilalis (yellow-striped armyworm)	Protoparce quatuordecimnotata (tomato hornworm)	Protoparce quatuordecimnotata (tobacco hornworm)	Beudanticola unipuncta (beet armyworm)	Spodoptera eximia (leaf armyworm)	Spodoptera frugiperda (fall armyworm)	Trichoplusia ni (cabbage looper)	Crops
FLORIDA Gainesville 9/20			BL	1					2			1						4			2		8		
MICHIGAN (Counties)																									
Monroe 9/14-20			BL	6								7						6				20		4	
Berrien 9/14-20			BL	11								5						2				16		9	
Branch 9/14-20			BL	9								4						5				24		7	
Kalamazoo 9/14-20			BL	3								1						7				9		3	
Jackson 9/14-20			BL	7								3						1				23		2	
Livingston 9/14-20			BL	8								2						1				28		5	
Ionia 9/14-20			BL	14								9						3				34		3	
Saginaw 9/14-20			BL	2								10						1				12		2	
Sanilac 9/14-20			BL	13								3						1				27		1	
Ogemaw 9/14-20			BL	5								1						0				10		0	
Newaygo 9/14-20			BL	7								3						11				16		4	
MISSISSIPPI																									
Stoneville 9/17-23	66-91	1.35	2 BL	272			3		912	4	4440							1152		27	688	1024	608	3344	
Tunica 9/17-23	63-92	3.45	BL	32			3		1216	9	6492							368	1	71	224	384	416	1362	
Rolling Fork 9/17-23	69-94	0.59	BL	64					256	112	1516							16		70	272	612	560	7104	
OHIO (Counties)																									
Licking 9/17-23				4								40						18				9		3	
Franklin 9/18-20				18					8			172						8				6		50	
TENNESSEE (Counties)																									
Maury 9/7-13												32						15		18		16			
Robertson 9/7-13												28						12		2		4			
Cumberland 9/7-13												24						8		2		12			
Knox 9/7-13												12						21		5		39		16	
Johnson 9/7-13												56						10		1		96			
Robertson 9/14-20												96						10		3		2			
Cumberland 9/14-20												68						12		5		16		8	
Johnson 9/14-20												36						28		4		4		4	
TEXAS																									
Waco 9/18-24				1			0		78	89	118							71				13	3	4	246
WISCONSIN																									
Mazomanie 9/17-23			BL	23								6						0				0			
Madison 9/15-23	45-84		BL	2								86						22				72			
Middleton 9/15-23			BL									41						9				16			
De Forest 9/14-20			BL									34						8				28			
Eden 9/14-20			BL									3						1				1			
Nenno 9/14-20			BL									6						0				2			
Wayne 9/14-20			BL									26						5				11			
Theresa 9/14-20			BL	1								12						2				16			
Hancock 9/16-22			BL									33						5				5			
WYOMING																									
Centennial 8/28-9/3				1			6											6							
Centennial 9/4-10				2			5											1							

STATUS OF THE SCREW-WORM (*Cochliomyia hominivorax*) IN THE SOUTHWEST

During the period September 19-25 a total of 47 cases was reported in the Southwestern Eradication Area by States and counties as follows: TEXAS - Presidio 3 and Zavala, Brewster and Jeff Davis 1 each; NEW MEXICO - Hidalgo 2, Luna 3 and Chaves, Grant and Catron 1 each; ARIZONA - Greenlee 4, Gila 6, Graham 8, Maricopa 9 and Pima, Cochise and Yavapai 2 each. The Republic of Mexico reported 371 cases; Sonora 58, Coahuila 19, Chihuahua 38, Veracruz 72, Tamaulipas 5, Territorio sur de Baja California 4, San Luis Potosi 20, Durango 75, Oaxaca 12, Nayarit 13, Chiapas 23, Morelos 5, Guerrero 10, Guanajuato 1, Tabasco 6 and Nuevo Leon, Mexico, Jalisco, Zacatecas and Puebla 2 each. Sterile screw-worm flies released: Texas 17,614,250, New Mexico 6,560,000, Arizona 20,198,000, California 640,000 and the Republic of Mexico 58,140,000.

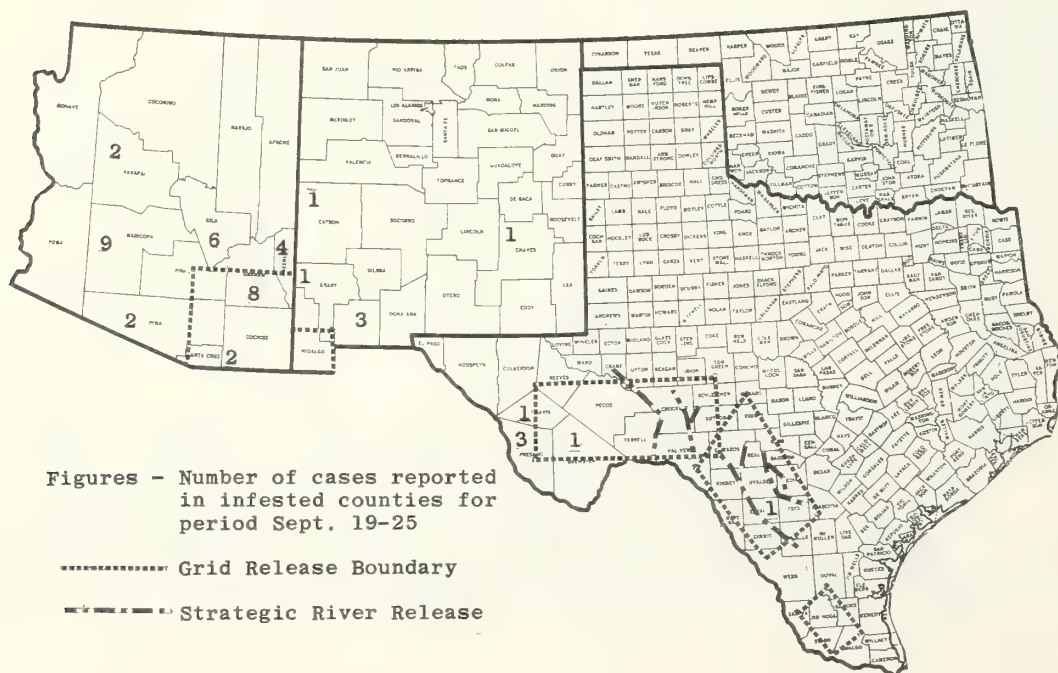
Year	Positive Cases		Negative Cases		Ratio of Positive Cases to 100 Cases Negative	
	Current	Cumulative	Current	Cumulative	Current	Cumulative
Table 1. Comparison of specimens reported during corresponding week in 1963 and 1964 in Southwestern Eradication Area. (1965 area figures include cases reported from Arizona and/or California; 1964 figures reflect those from the 5-State area).						
1963	349	3321	148	5167	235.81	64.27
1964	1	107	94	4581	1.06	2.33
1965	47	762	68	3937	69.11	19.35

Table 2. Comparison of specimens reported during corresponding week and in a corresponding area in 1964 in the United States-Mexico Barrier Zone.*						
1964	354	2524	45	1524	786.66	165.61
1965	163	3884	30	1759	543.33	220.80

Table 3. Specimens determined in Mexico south of Barrier Zone.

1965 188

* Barrier Zone - Area in which screw-worm eradication operations are being carried out in an effort to prevent establishment of self-sustaining screw-worm populations in the United States. (Anim. Health Div.).



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UNITED STATES DEPARTMENT OF AGRICULTURE W-206
Agricultural Research Service
Entomology Research Division
Grain and Forage Insects Research Branch

SAWFLY POPULATION SURVEY

By

Lew E. Wallace

SUMMARY

A general survey of the sawfly populations in the state was attempted. From the examination of 50 stems on the border and 20 yards in, a map of the populations was plotted. As many samples as were deemed necessary were taken in each county with wheat acreage.

In general, the sawfly populations were low. Where high populations were encountered it was sometimes restricted to one or a few fields in the area and indicating the farming practices of one operator. In some cases, however, a sizeable area had a fair population.

REPORT

A survey was conducted to determine areas of high sawfly populations in Montana. This was a preliminary study to determine the best way to make such a survey and to locate wheat-producing areas in the state.

Procedure

Two samples were made in each field along the border and 20 yards in on the strip. Fifty stems were examined at each location. The stems were examined to determine if they were solid or hollow. The solid stems were assumed to be sawfly resistant wheat and were not sampled. Twenty sampling sites in each county were attempted, and in some counties more sites were sampled.

Results

The results are shown in the map (Figure 1). The populations in general are light. However, in the Triangle area several pockets of populations high enough to pose a potential threat are plotted. In one area south of Cut Bank a high population was found. In Phillips, McCone, and Sweet Grass counties, pockets of fair sawfly infestations occurred also.

Conclusions

The spottiness of the infestations of economic importance indicates that farming practices of individual operators may be responsible. In other areas where the population is heavy over a larger area, climatic conditions coupled with farming practices may be responsible.

The overall low populations are probably due in part to the farm program which has taken the farmer's acreage out of wheat and forced him into a rotation of barley, durum or other sawfly resistant crops. It is also due in part to winter wheat in place of spring wheat. However, the threat remains and an increase of susceptible wheat could easily afford the sawfly an opportunity to increase.

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